**PERFORMANCE ANALYSIS OF SHOCK-ABSORBER USING TEST-RIG**

**Synopsis:**

This project consists of understanding and analysing the performance characteristics of shock-absorbers under various damping conditions and different amplitudes.

The shock-absorber is mounted on a mechanical test-rig. The setup uses a reciprocating type cam actuated by a speed reduction gearbox to simulate the load conditions on the shock-absorber. The gearbox is driven by a 0.5HP D.C. electric motor.

Suitable transducers (load-cells, etc.) are used to measure the required variables. Interfacing of these transducers with a computer is done using a custom-made circuit, and the electrical signals from them are fed as input.

Suitable software (MATLAB, VisualBasic, etc.) are used to take these inputs and generate required force transmissibility ratio (TR) vs. frequency curves of the shock-absorber.

* Air shocks vs. spring shocks
* Setup used in service centres for quick testing of current performance status.